

How Parking Management Supports Multi-modal Strategies in Leading Cities Around the World

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Introduction

Top Annual Public Transport Ridership

1. Beijing	3.660 billion
2. Tokyo	3.411 billion
3. Shanghai	3.401 billion
4. Seoul	2.620 billion
5. Guangzhou	2.568 billion
6. Moscow	2.384 billion
7. New York City	1.757 billion
8. Hong Kong	1.716 billion
9. Mexico City	1.624 billion
10. Paris	1.526 billion

Tokyo Public Transport Ridership

Daily number of train passengers in the Greater Tokyo Area: 20-million more than the individual populations of over 100 countries in the world.



Qatar



Qatar Parking Master Plan

Institutional

Parking Model

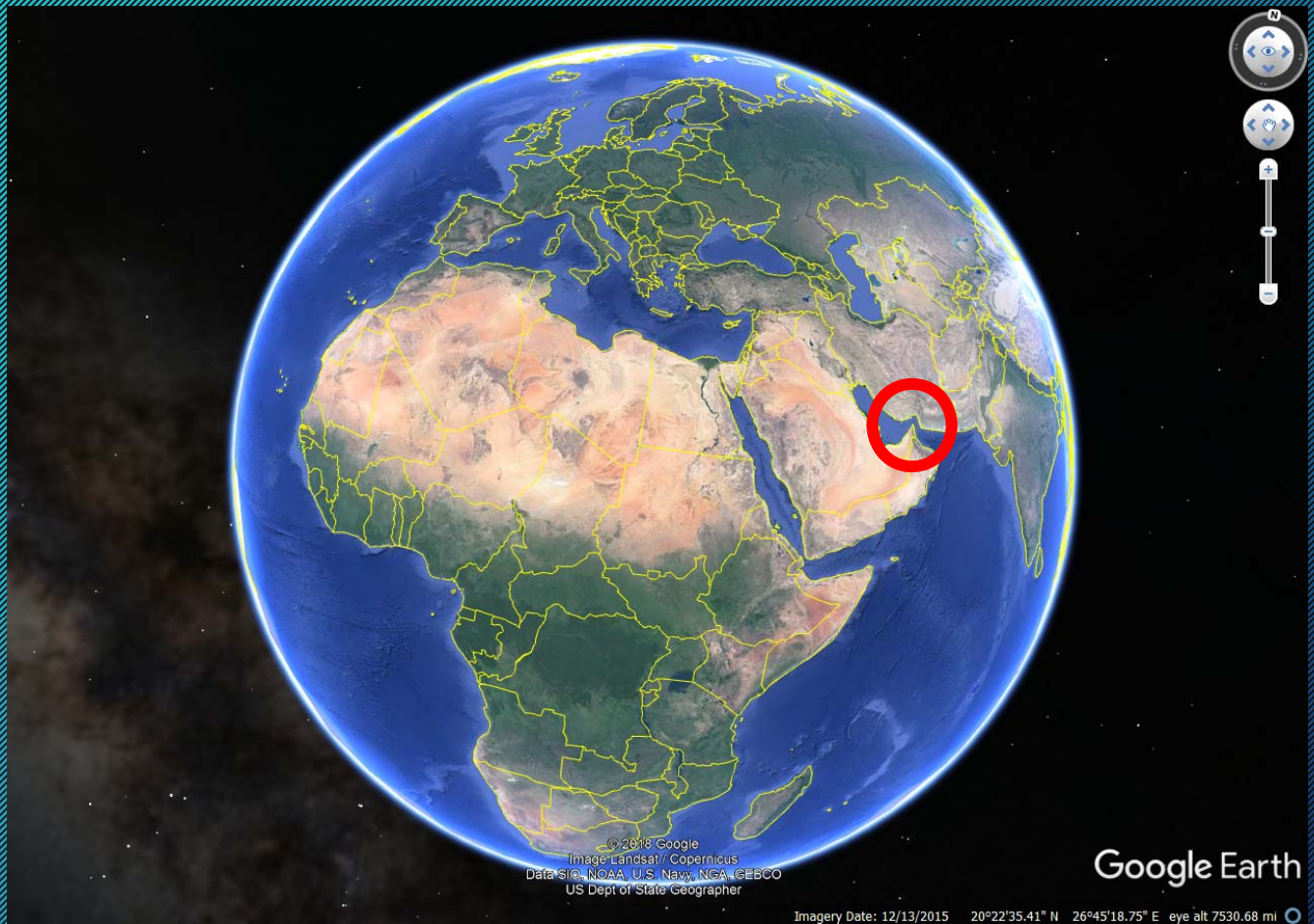
Design Manual

Surplus/Deficit

Policies

Best Practices

Where is Qatar?



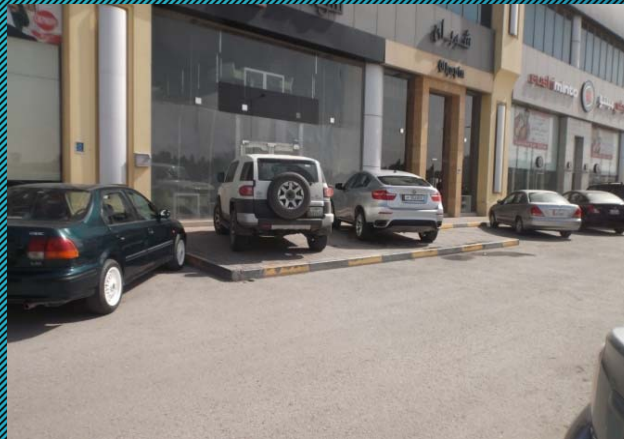
Where is Qatar?



Doha, Qatar

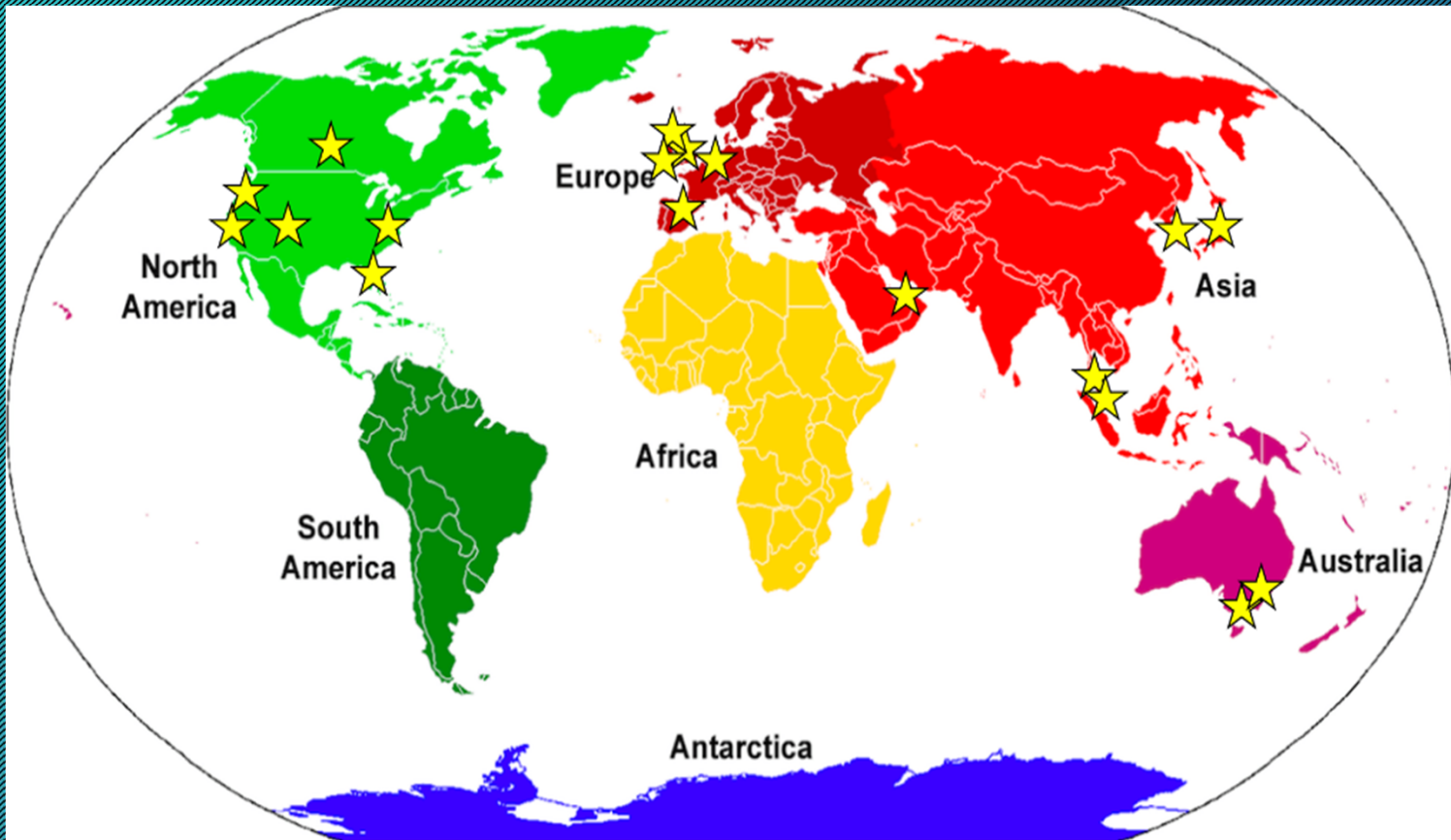


Qatar Parking Problems



Cities and Topics

Best Practice Cities Reviewed



Best Practice Topics

Admin.

Private
Parking

Policies

Demand
Management

Public
Transport

Technology

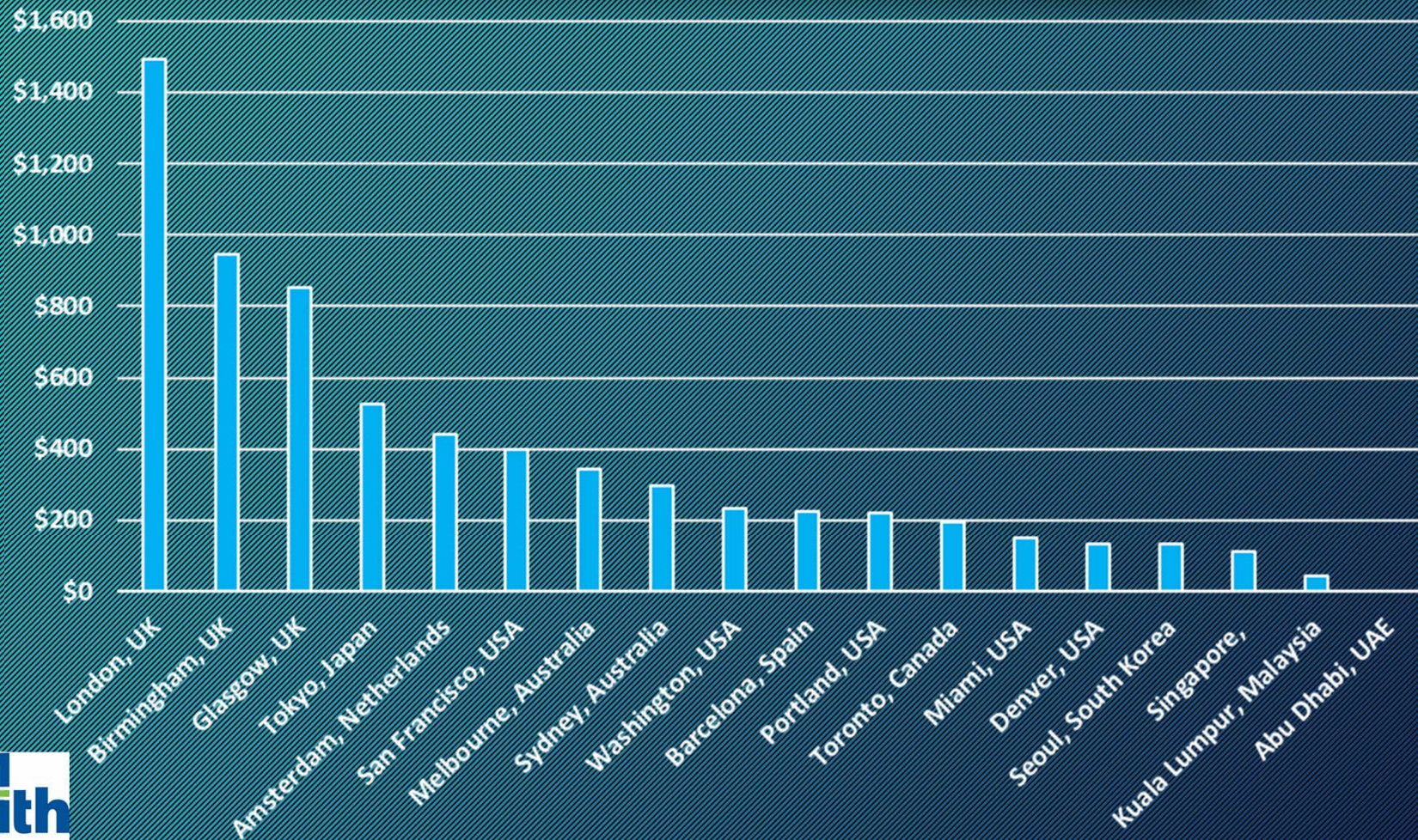
Enforcement

Safety

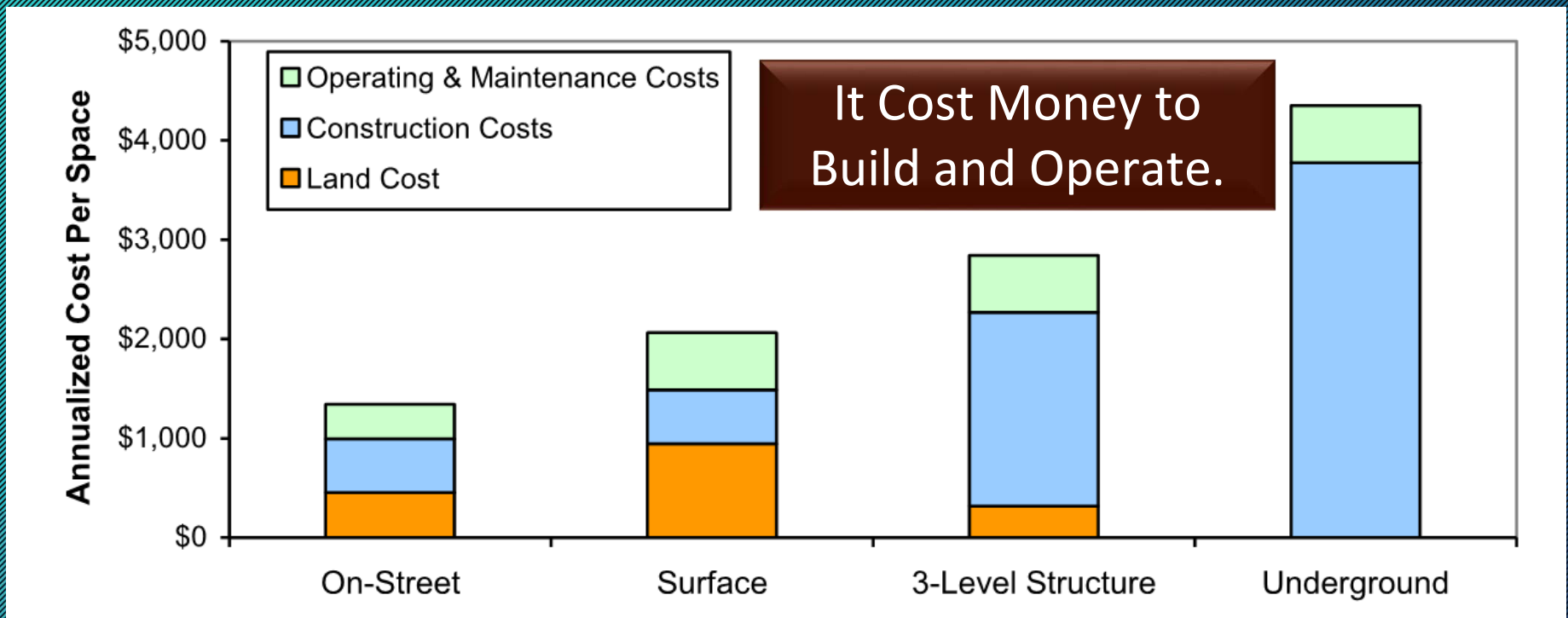
Pricing

Pricing

Monthly Parking

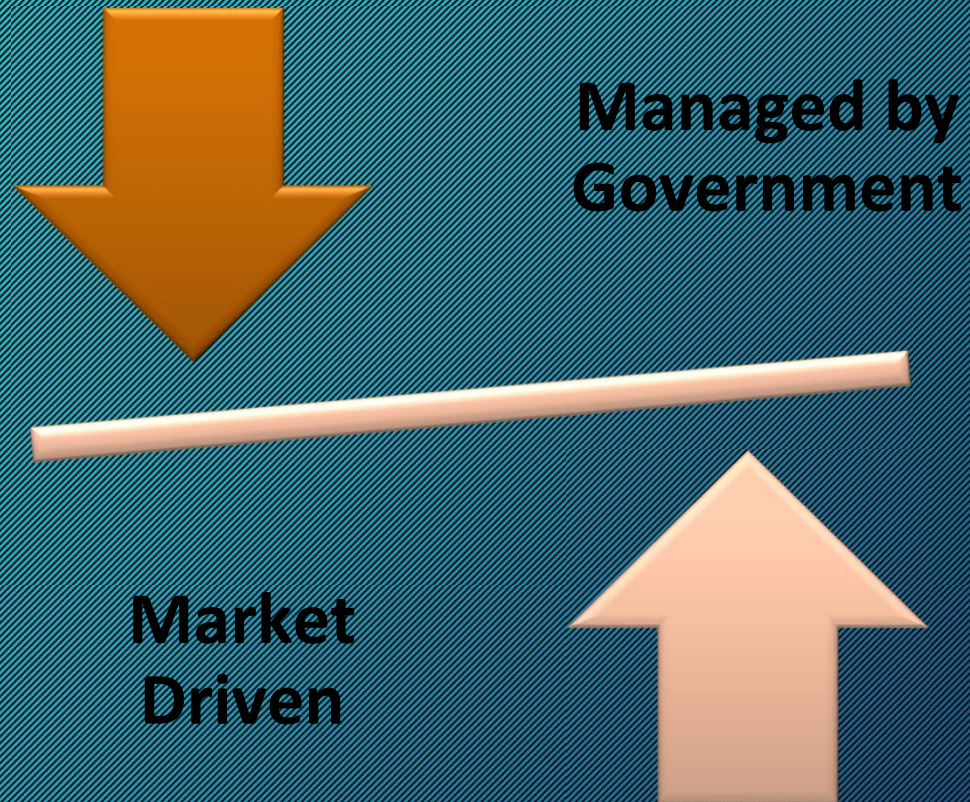


Parking is Not Free



Source: Victoria Transport Policy Institute- Parking Pricing Implementation Guidelines (Cost in US Dollars)

Overarching Pricing Philosophies



Traditional Industry Motivation for Parking Charges



Generate Surplus Revenue

- Reinvest in Parking
- Invest in other Transport Modes



Pay for Cost of Parking (and no more)

- Construction/Debt
- Operating Expenses



Help to Manage Parking System

- Where People Park
- How Long They Park

More Recent Industry Motivation for Parking Charges



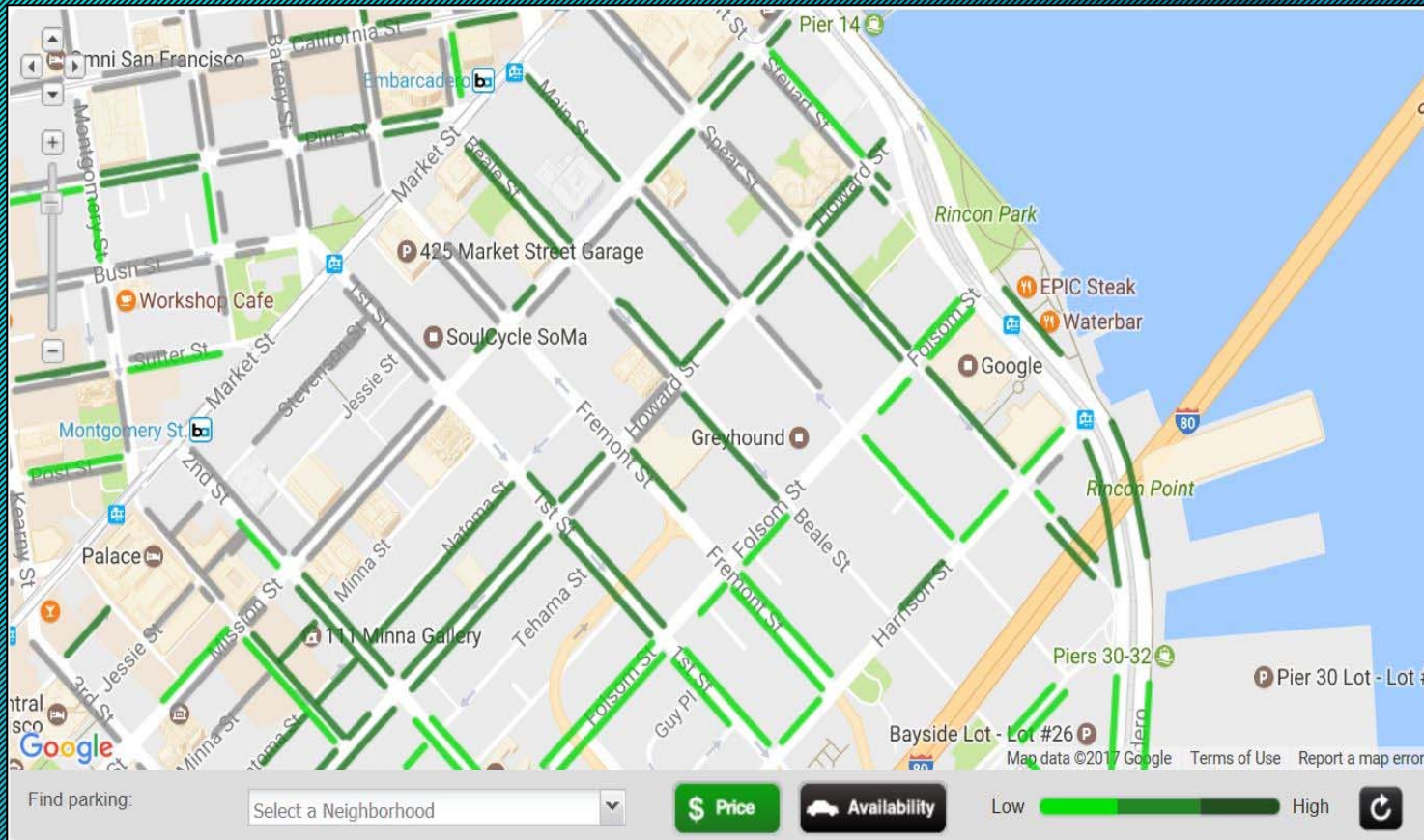
Mode Shift

- Public Transport
- Walking/Biking

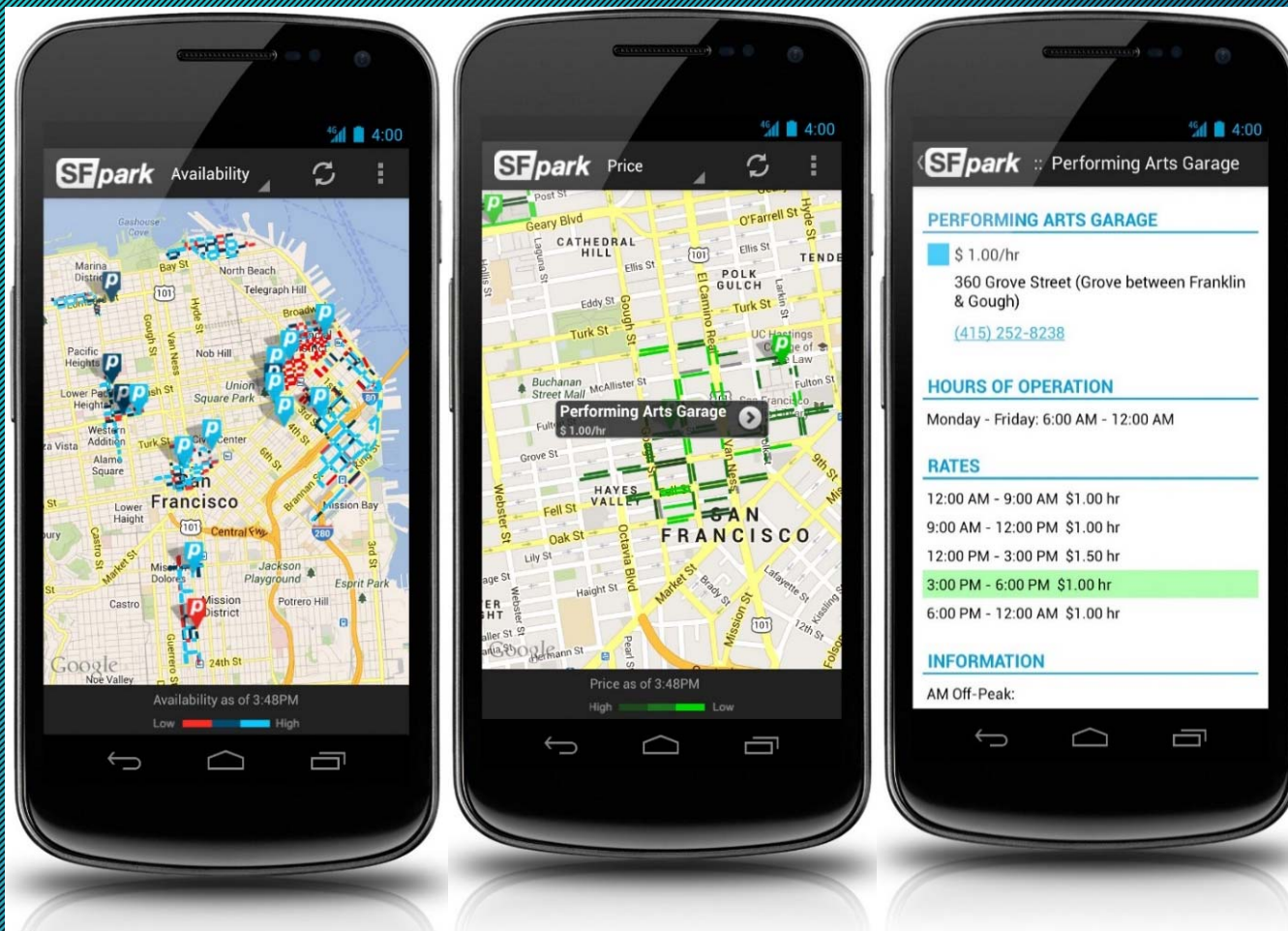


Decrease Congestion

Variable Pricing in San Francisco

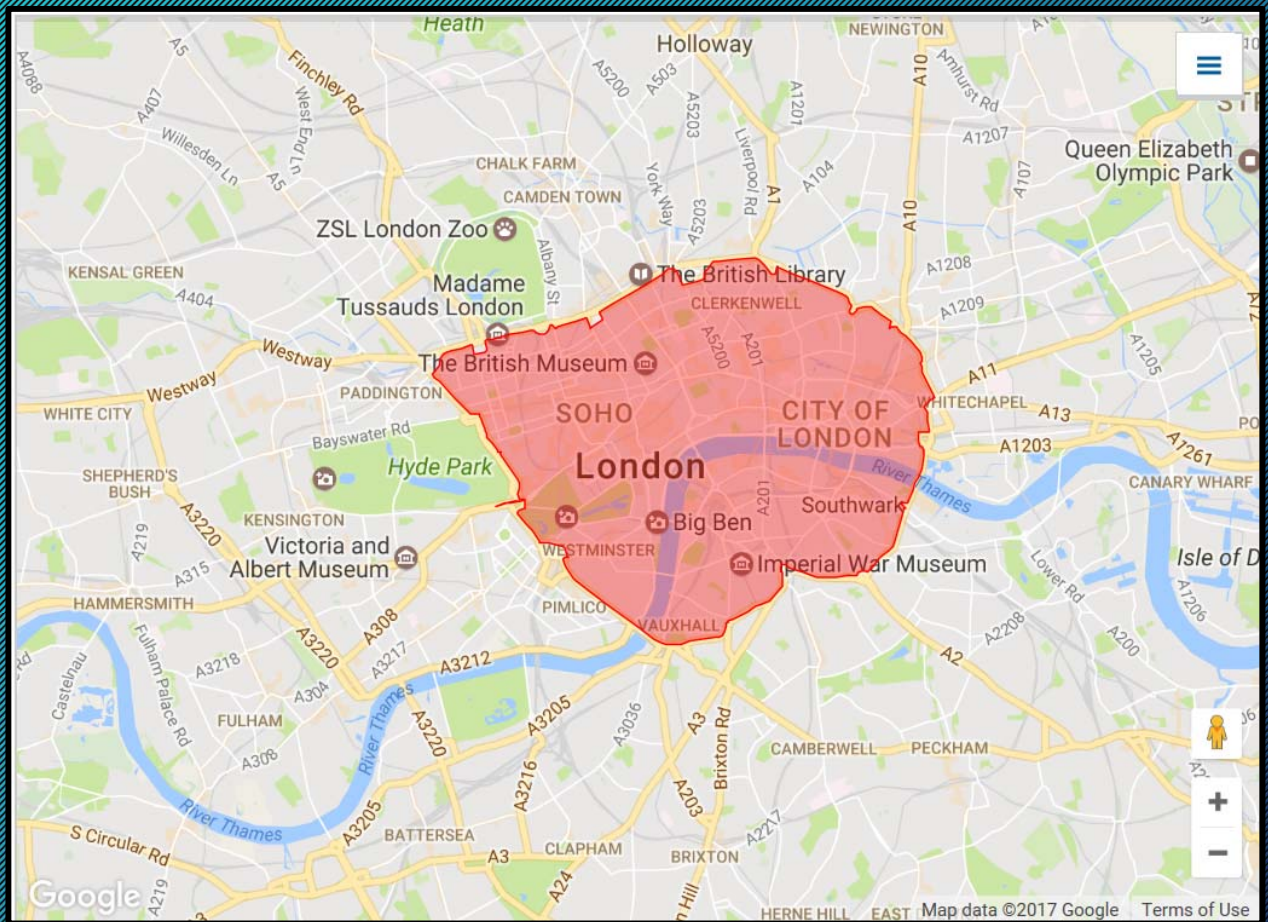


Variable Pricing in San Francisco



Limiting Supply or Demand

London, UK Congestion Charge Zone



Public Transport Accessibility Levels (PTAL)

	6 central London	PTAL 6 inner/ outer London & 5	4 to 2	1 maximum
Retail land use		1 space per x square metres of gross floor area		
Smaller food store (up to 500m ² gfa)	–	75	50 – 35	30
Food supermarket (up to 2500m ² rfa/c4000m ² gfa)	–	45 – 30	30 – 20	18
Food superstore (over 2500m ² rfa/c4000m ² gfa)	–	38 – 25	25 – 18	15
Non-food warehouse	–	60 – 40	50 – 30	30
Garden centre	–	65 – 45	45 – 30	25
Town centre/shopping mall	–	75 – 50	50 – 35	30

PTAL Map

Address or co-ordinates

eg. NW1 6XE or 530273, 179613 Go


Access level (PTAL) Time mapping (TIM)

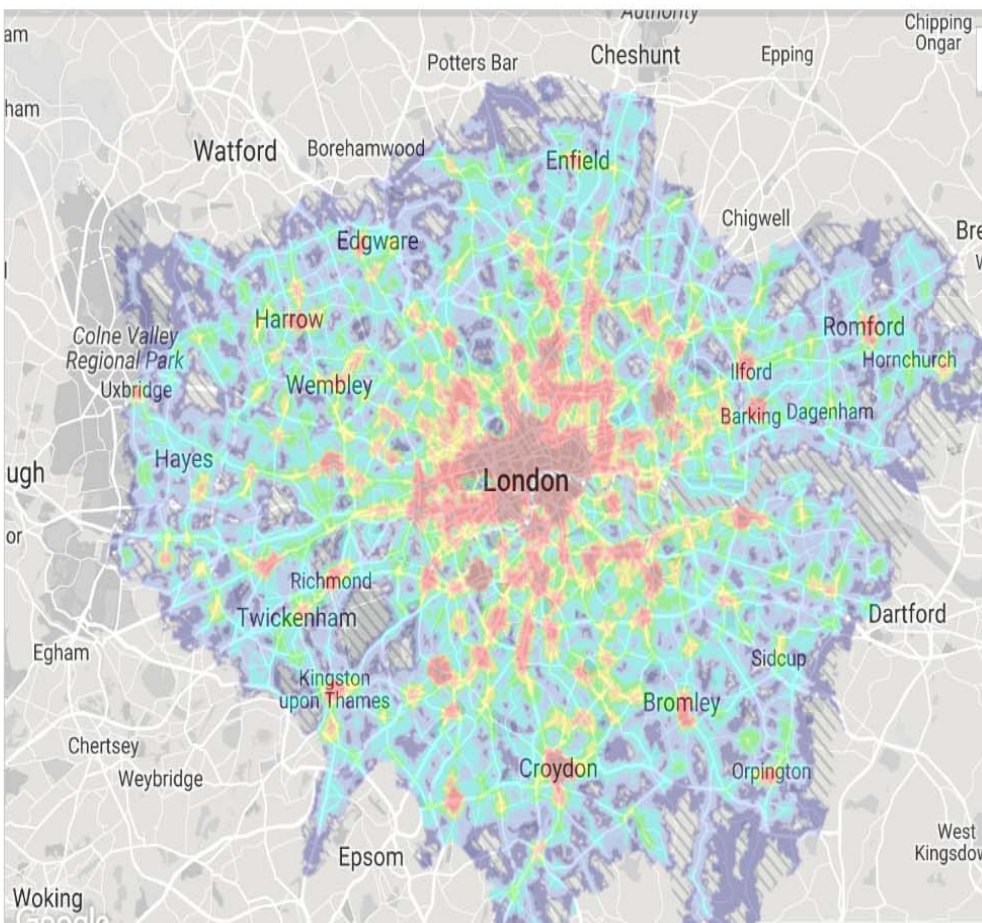
PTAL: a measure which rates locations by distance from frequent public transport services.

Map key - PTAL

0 (Worst)	1a
1b	2
3	4
5	6a
6b (Best)	

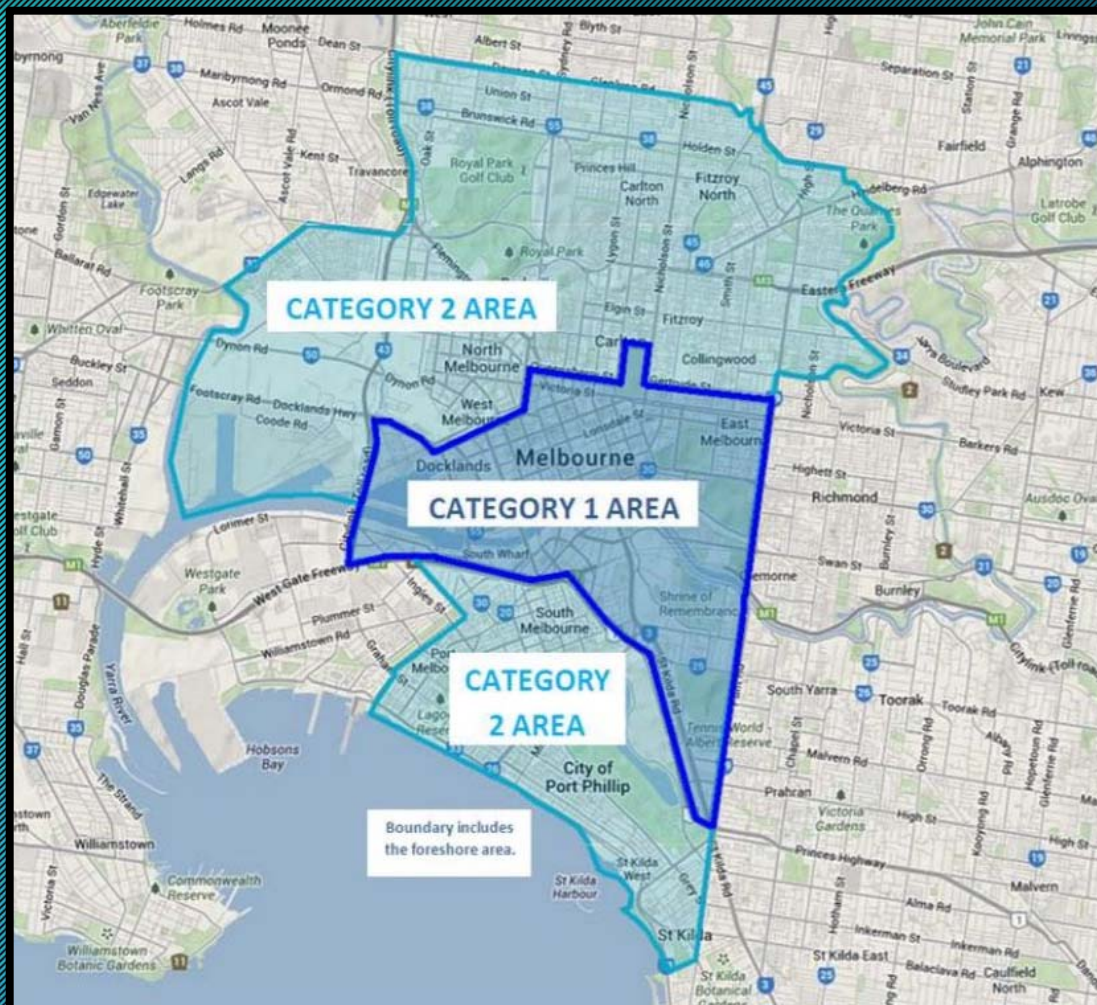
Map layers

 PTAL (cell size: 100m)



The map displays a color-coded accessibility score for various locations around London. The central area, including London, is colored in shades of red and orange, indicating high accessibility (PTAL 5-6). Surrounding areas like Watford, Harrow, and Enfield are in yellow and green, indicating moderate accessibility (PTAL 3-4). Further out, areas like Uxbridge and Epsom are in light blue and purple, indicating lower accessibility (PTAL 1-2). The most remote areas, such as Chipping Ongar and West Kingsdown, are in grey, indicating the lowest accessibility (PTAL 0).

Congestion Levy Map Melbourne, Australia



All Pedestrian Zone in Barcelona



Proof of Residential Parking in Tokyo



標章番号

0000000000

ホログラムシール

保管場所の届出適用
地域を表示する

警察署長

発行警察署長

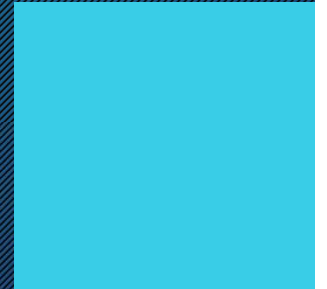
Car2Go- Toronto



Singapore Demand Management



Privately Owned and
Operated



Parkopedia Glasgow, UK

Parkopedia Reservations

Glasgow
Now > 2 hours

Sort by: Distance | Price

Location	Spots	Price	Duration	Distance to Destination	Vehicle Restrictions	Action
Cambridge Street	812 spots	£3	2 hours	2 min	Wheelchair, Bicycle, Motorcycle, Car (6' 6")	Reserve
Sauchiehall Street	372 spots	£4	2 hours	4 min	Wheelchair, Bicycle, Motorcycle, Car (6' 3")	Reserve
Dundasvale	460 spots	£2.50	2 hours	4 min	Wheelchair, Motorcycle, Car (6' 6")	Reserve

Map Parking Spots:

- £3.00
- Reserve £4.00
- Reserve £5.60
- £2.00
- £3.00
- £1.60
- £5.80
- £7.00
- Reserve £3.50
- £7.00
- Reserve £3.50
- £3.00
- Reserve £3.50
- £1.50
- £3.50
- £3.00

Smart Phone Apps Evaluation

CITY	COUNTRY	NUMBER OF SMART PHONE APPS AVAILABLE		Average User Ratings Out of 5.0
		Android	iPhone	
Melbourne	Australia	5	2	4.3
Sydney	Australia	5	0	3.3
Toronto	Canada	10+	7	4.4
Tokyo	Japan	2	0	3.9
Kuala Lumpur	Malaysia	1	0	2.9
Amsterdam	Netherlands	7	5	4.0
Singapore	Singapore	9	4	4.0
Seoul	South Korea	7	7	---
Barcelona	Spain	10+	5	3.8
Abu Dhabi	United Arab Emirates	5	5	4.1
Birmingham	United Kingdom	10+	0	3.5
Glasgow	United Kingdom	3	0	3.8
London	United Kingdom	10+	8	3.7
Denver	United States	10+	1	4.2
Miami	United States	10+	7	3.5
Portland	United States	7	1	4.0
San Francisco	United States	10+	10+	4.1
Washington	United States	10+	3	4.2

Other Concepts

Seoul Green Parking Program



Female Parking Spaces in Seoul

